AMENDMENT AND PRESENTATION OF CLAIMS

Please replace all prior claims in the present application with the following claims, in which no claims are canceled, withdrawn from consideration, currently amended, or newly presented.

1. (Original) In a communications network having one or more network elements capable of generating various messages having attributes indicating the existence of an alarm condition, an apparatus for remotely monitoring alarm messages comprising:

first means for receiving communication of original textual messages generated from one or more network element subsystems the network element subsystems including console connections and application connections; means for mapping text of a received original message to one or more of a plurality of alarm attributes;

means for determining the presence of an alarm condition from said one or more attributes and generating one or more responses according to said type of alarm condition; and,

means for enabling a remotely located user access to said one or more network elements via a display interface at a remote terminal, said response including automatically presenting said remotely located user of an alarm condition at a network element via said display interface, said remotely located user being enabled to access said network element from said remote terminal for further responsive action thereof.

2. (Original) The apparatus as claimed in claim 1, wherein said first server means includes a terminal server means physically connected to a console port I/O of each said network element, said remotely located user having access to said console port via said user interface.

3. (Original) The apparatus as claimed in claim 1, wherein said first server means includes means for receiving communication of original textual messages from a network application running on said network element, said first server means including a mailbox facility means for receiving said alarm messages.

4. (Original) The apparatus as claimed in claim 1, wherein said network application running on said network element is a Log Management Facility application.

5. (Original) The apparatus as claimed in claim 1, further comprising means for presenting an indication of said alarm condition to said remotely located user via a network connection.

6. (Original) The apparatus as claimed in claim 5 wherein said indication of said alarm condition is presented as on said display interface as a graphical icon, said graphical icon being color-coded to indicate alarm condition severity.

7. (Original) The apparatus as claimed in claim 2, wherein said terminal server means includes a telnet terminal server.

8. (Original) The apparatus as claimed in claim 7, wherein said means for enabling a remotely located user access to said one or more network elements includes a network connection.

9. (Original) The apparatus as claimed in claim 7, wherein said network socket connection is pursuant to a TCP/IP protocol.

10. (Original) The apparatus as claimed in claim 1, wherein said means for mapping text of a received original message to one or more of a plurality of alarm attributes includes utilizing regular expression matching.

11. (Original) The apparatus as claimed Mi claim 1, wherein said message attributes include one or more selected from the group comprising: originating network element, time, alarm severity level, alarm mnemonic, alarm description, process name, and network element name.

12. (Original) The apparatus as claimed in claim 11, wherein said means for determining presence of an alarm condition from said one or more attributes includes means for applying configuration rules to said alarm attributes, said configuration rules stored as text in a first storage means at or near said first means and accessible therefrom.

13. (Original) The apparatus as claimed in claim 12, further including text editor means for enabling a user to modify existing configuration rules stored in said storage means via said user display interface, said text editor means further enabling said user to generate new configuration rules for storage in said storage means, said new configuration rules creating a new alarm condition.

14. (Original) The apparatus as claimed in claim 12, wherein said configuration rules further provides a sifting operation for sifting through said attributes to match said alarm condition with a pre-determined alarm condition.

15. (Original) The apparatus as claimed in claim 14, wherein said sifting means operation

enables an alarm message to be terminated if a match with a pre-determined alarm condition is found.

16. (Original) The apparatus as claimed in claim 12, wherein said configuration rules further provide a logging operation for automatically logging alarm conditions in a second storage means at or near said first means and accessible therefrom.

17. (Original) The apparatus as claimed in claim 16, further including means for generating reports including past alarm conditions stored in said second storage means.

18. (Original) The apparatus as claimed in claim 1, wherein a response action includes initiating transmission of an e-mail message and command procedure.

19. (Original) The apparatus as claimed in claim 1, wherein a response action includes initiating transmission of a paging message and command procedure.

20. (Original) The apparatus as claimed in claim 1, wherein said physical connection to said console port I/O includes an RS-232 link.

21. (Original) In a communications network having one or more network elements capable of generating various messages having attributes indicating the existence of an alarm condition, a method for remotely monitoring alarm messages comprising:

receiving communication of original textual messages generated from one or more network element subsystems the network element subsystems including console connections and

application connections; mapping text of a received original message to one or more of a plurality of alarm attributes;

determining the presence of an alarm condition from said one or more attributes and generating one or more responses according to said type of alarm condition; and,

enabling a remotely located user access to said one or more network elements via a display interface, wherein a response includes automatically presenting said remotely located user of an alarm condition via said display interface, said remotely located user capable of accessing said particular network element generating said alarm condition for further responsive action thereof.

22. (Original) The method as claimed in claim 21, further including providing a physical connection between each said network element and a terminal server device enabling remote access to said one or more network elements via said user display interface.

23. (Original) The method as claimed in claim 21, further including providing a mailbox facility means for receiving said alarm messages, and retrieving said messages from said mailbox facility prior to said mapping step.

24. (Original) The method as claimed in claim 21, further including providing a network connection to enable presentation of said alarm condition to said remotely located user, said alarm condition being presented on said display interface as a graphical icon.

25. (Original) The method as claimed in claim 24, wherein said graphical icon is color-coded to indicate alarm condition severity.

26. (Original) The method as claimed in claim 21, further including providing a network socket connection to enable said remotely located user access to said one or more network elements.

27. (Original) The method as claimed in claim 26, wherein said network socket connection is pursuant to a TCP/IP protocol.

28. (Original) The method as claimed in claim 21, wherein said step of mapping text includes utilizing regular expression matching.

29. (Original) The method as claimed in claim 21, wherein said message attributes include one or more selected from the group comprising: originating network element, time, alarm severity level, alarm mnemonic, alarm description, process name, and, network element name.

30. (Original) The method as claimed in claim 21, wherein said determining step includes applying configuration rules to said alarm attributes, said configuration rules being stored as text in a first storage means at or near said first means and accessible therefrom.

31. (Original) The method as claimed in claim 30, further providing text editor means for enabling a user to modify existing configuration rules stored in said storage means via said user display interface, said text editor means further enabling said user to generate new configuration rules for storage in said first storage means, said new configuration rules creating a new alarm condition.

32. (Original) The method as claimed in claim 30, wherein said step of applying configuration rules further includes performing a sifting operation for sifting through said attributes to match said alarm condition with a pre-determined alarm condition.

33. (Original) The method as claimed in claim 32, wherein said sifting operation enables an alarm message to be terminated if a match with a pre-determined alarm condition is found.

34. (Original) The method as claimed in claim 30, wherein said step of applying configuration rules further includes the step of performing a logging operation for automatically logging alarm conditions in a second storage means at or near said first storage means and accessible therefrom.

35. (Original) The method as claimed in claim 34, further including the steps of accessing alarm condition stored in said second storage means and generating reports containing said past alarm conditions.

36. (Original) A telecommunications network alarm monitoring system comprising: a service control point comprising:

a transaction server;

a communications server; and

a terminal server to provide access to a plurality of event messages from the transaction server and communications server and to transmit the same over a network link;

a telecommunications network alarm monitoring server linked to the terminal server of the service control point over the network link;

a network alarm monitoring process to map the event messages to an alarm data structure; and

a network link to the telecommunications network alarm monitoring server to enable transmission of messages by the network alarm monitoring server in response to recognized alarm conditions.

37. (Original) The telecommunications alarm monitoring system of claim 36 wherein access is enabled to the terminal server is over an Internet Protocol network.

38. (Original) The telecommunications alarm monitoring system of claim 36 wherein the link to the telecommunications network alarm monitoring server to enable transmission of messages by the telecommunications network alarm monitoring server in response to recognized alarm conditions comprises an Internet Protocol network.